

RECEIVED  
CENTRAL POSTER

DEC 21 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Tadros	
Application No.: 09/682,749	Group Art Unit: 1711
Filed: 10/12/2001	Examiner: M. Bissett
Title: Multilayer, Weatherable Compositions And Method of Manufacture Thereof	Confirmation No.: 8016
Attorney Docket No.: GEPL.P-068	

SECOND DECLARATION UNDER 37 CFR § 1.132

The undersigned hereby declares as follows:

1. I am a named inventor of the above-referenced application, and I am familiar with the application, including the claims thereof.
2. I understand that an Official Action has again issued in this case in which the Examiner takes the position that the multilayer composition is obvious in light of the combination of prior art references.
3. The claimed composition in our application includes three defined layers in a defined spatial relationship, namely an upper layer, an intermediate layer and a substrate layer. The top two of these layers have a well-defined composition. Specifically, the upper layer consists essentially of a cycloaliphatic polyester and certain specified types of UV stabilizers; the intermediate layer consists essentially of a cycloaliphatic polyester, and may also include  $\text{TiO}_2$  or a dye, pigment or special effects additive. An important characteristic of these compositions is the improved gloss retention that is observed upon weathering.
4. Gloss is a characteristic of the outer surface of a material. Those skilled in the art believe that loss of gloss upon weathering is the result of non-homogeneous erosion that takes place on the surface and creates roughness. In the compositions of the present invention, the material used to make

the intermediate layer has a significant affect on the retention of gloss when the material is weathered. The Table below presents data on properties of various composites. Only the first composite is in accordance with the invention. As can be seen from this Table (top box), the gloss retention is dependent on the nature of the compositions' second layer, with only one of the second layer combinations giving good gloss retention.

		3000 hrs Weathering	
top layer	second layer	dE	Gloss
PCCD, UV2	PCCD, TiO <sub>2</sub>	1.1	82
PCCD, UV2	PCCD/PC, TiO <sub>2</sub>	5.2	32
PCCD, UV2	PC, TiO <sub>2</sub>	1.2	33
PCCD/PC, UV2	PCCD/PC, TiO <sub>2</sub>	2.6	5
PCCD/PC, UV2	PC, TiO <sub>2</sub>	5.0	68

12/21/2004 . 15:32 9704680104  
U120014555 GL TECHNOLOGY

5. Why this would be the case is not really understood. There is no logical explanation for why the nature of this intermediate layer, spaced away from the outer surface would have any bearing on the behavior of this outer surface. Thus, the results, as obtained, are quite surprising and are not something that would have been predicted or expected by a person skilled in the art.

6. It is further noted that the Examiner has argued that you would expect an improvement in color performance using a second or intermediate layer with improved weathering properties. While this argument is facially reasonable, it is not consistent with the results actually observed. For example, in the first portion of the Table above, the Examiner's argument would suggest that the color change dE, should change progressively for the worse as PCCD is replaced with PC. This, however, is not what is observed. Interestingly, the expected trend (using the examiner's analysis) is observed when the top layer includes PC as well as PCCD (lower box in Table above). Thus, the compositions of the present invention, represent an island of uniqueness in which seemingly logical arguments are not applicable, and in which the compositions have unique and unexpected properties, particularly with respect to gloss retention.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

**dated:**

Sept. 15 2004

Safwat E. Tadros

**dated:**

**Peter H. Th. Vollenberg**

12/21/2004 15:32 9704680104  
08/19/04 14:15 FAX 812 831 4179

OPPEDAHL AND LARSON

L. LUNIANA

PAGE 14/16  
DEC 21 2004

RECEIVED  
CENTRAL INTELLIGENCE AGENCY

DEC 21 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Tadros

Application No.: 09/682,749

Filed: 10/12/2001

Title: Multilayer, Weatherable Compositions  
And Method of Manufacture Thereof

Attorney Docket No.: GEPL.P-068

Group Art Unit: 1711

Examiner: M. Bissett

Confirmation No.: 8016

SECOND DECLARATION UNDER 37 CFR § 1.132

The undersigned hereby declares as follows:

1. I am a named inventor of the above-referenced application, and I am familiar with the application, including the claims thereof.
2. I understand that an Official Action has again issued in this case in which the Examiner takes the position that the multilayer composition is obvious in light of the combination of prior art references.
3. The claimed composition in our application includes three defined layers in a defined spatial relationship, namely an upper layer, an intermediate layer and a substrate layer. The top two of these layers have a well-defined composition. Specifically, the upper layer consists essentially of a cycloaliphatic polyester and certain specified types of UV stabilizers; the intermediate layer consists essentially of a cycloaliphatic polyester, and may also include  $\text{TiO}_2$  or a dye, pigment or special effects additive. An important characteristic of these compositions is the improved gloss retention that is observed upon weathering.
4. Gloss is a characteristic of the outer surface of a material. Those skilled in the art believe that loss of gloss upon weathering is the result of non-homogeneous erosion that takes place on the surface and creates roughness. In the compositions of the present invention, the material used to make

the intermediate layer has a significant affect on the retention of gloss when the material is weathered. The Table below presents data on properties of various composites. Only the first composite is in accordance with the invention. As can be seen from this Table (top box), the gloss retention is dependent on the nature of the compositions' second layer, with only one of the second layer combinations giving good gloss retention.

top layer	second layer	3000 hrs Weathering	
		dE	Gloss
PCCD, UV2	PCCD, TiO <sub>2</sub>	1.1	82
PCCD, UV2	PCCD/PC, TiO <sub>2</sub>	5.2	32
PCCD, UV2	PC, TiO <sub>2</sub>	1.2	33
PCCD/PC, UV2	PCCD/PC, TiO <sub>2</sub>	2.6	5
PCCD/PC, UV2	PC, TiO <sub>2</sub>	5.0	68

5. Why this would be the case is not really understood. There is no logical explanation for why the nature of this intermediate layer, spaced away from the outer surface would have any bearing on the behavior of this outer surface. Thus, the results, as obtained, are quite surprising and are not something that would have been predicted or expected by a person skilled in the art.

6. It is further noted that the Examiner has argued that you would expect an improvement in color performance using a second or intermediate layer with improved weathering properties. While this argument is facially reasonable, it is not consistent with the results actually observed. For example, in the first portion of the Table above, the Examiner's argument would suggest that the color change dE, should change progressively for the worse as PCCD is replaced with PC. This, however, is not what is observed. Interestingly, the expected trend (using the examiner's analysis) is observed when the top layer includes PC as well as PCCD (lower box in Table above). Thus, the compositions of the present invention, represent an island of uniqueness in which seemingly logical arguments are not applicable, and in which the compositions have unique and unexpected properties, particularly with respect to gloss retention.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

dated: \_\_\_\_\_

Safwat E. Tadros

dated: \_\_\_\_\_

August 19, 2004

Peter H. Th. Vollenberg